

Amendments to the Claims (this listing of claims replaces all prior versions):

1. (currently amended) A suspension system comprising:

in a vehicle suspension having an actuator, and

switch circuitry powered by energy, from movement of the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator, the switch circuitry to passively damp the actuator during a failure of a power supply for providing power to the actuator.
2. (currently amended) The system of claim 1 in which the actuator ~~has~~ comprises a coil assembly, and the switch circuitry ~~including~~ comprises a switch for electrically connecting the coil assembly.
3. (currently amended) The system of claim 2 in which the coil assembly ~~[[is]]~~ comprises a multiple-phase coil assembly, and the switch electrically ~~connecting~~ connects one or more coil ends to change the passive damping characteristic of the actuator.
4. (previously presented) The system of claim 2 in which the switch circuitry comprises a solid-state device.
5. (currently amended) The system of claim 4 also comprising, ~~in the vehicle suspension, a~~ clamp circuit ~~including~~ comprising a rectifier, and in which the switch circuitry comprises a single unidirectional switch.
6. (currently amended) The system of claim 1 in which the actuator ~~includes~~ comprises an armature and a stator, ~~the a~~ movement of the actuator generating a back electromotive force (EMF) as a result of the armature moving relative to the stator within the actuator, the back EMF powering the switch circuitry.
7. (currently amended) The system of claim 6 also comprising a supplemental circuit for boosting in which the back EMF is boosted by a supplemental circuit.
8. (original) The system of claim 7 in which the supplemental circuit comprises a bipolar Royer oscillator capable of operating at an input voltage of approximately 0.5 volts.

9. (currently amended) The system of claim 1 in which the switch circuitry is also comprises switch circuitry enabled during vehicle startup and shutdown.

10. (cancelled)

11. (currently amended) The system of claim 1 in which the switch circuitry [[is]] comprises switch circuitry pulsed to change the passive damping characteristic of the actuator.

12. (currently amended) A suspension system comprising:
~~in a vehicle suspension system having~~ an actuator,
power-switching devices for providing an active clamp function ~~provided by power-switching devices~~ for the actuator; and

switch circuitry powered by energy, from movement of the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator, the switch circuitry to generate a passive damping function during a failure of a power supply for providing power to the actuator.

13. (currently amended) The system of claim 12 in which the actuator ~~has~~ comprises a multiple-phase coil assembly, and the switch circuitry ~~including~~ comprises a switch for electrically connecting one or more coil ends to change a passive damping characteristic of the actuator.

14. (previously presented) The system of claim 13 in which the switch circuitry comprises a solid-state device.

15. (currently amended) The system of claim 14 also comprising a clamp circuit including comprising a rectifier, and in which the switch circuitry comprises a single unidirectional switch.

16. (currently amended) The system of claim 12 in which the switch circuitry is also comprises switch circuitry enabled during a vehicle startup and shutdown.

17. (canceled)

18. (currently amended) The system of claim 12 in which the switch circuitry ~~[[is]]~~ comprises switch circuitry pulsed to change the passive damping characteristic of the actuator.

19. (currently amended) A vehicle suspension system comprising:
an electronic controller adapted to produce an actuator control signal; and
an actuator adapted to receive electrical power from an external power source and to produce a controlled force in response to the actuator control signal produced by the electronic controller, the actuator ~~including~~ comprising switch circuitry powered by energy, from power generated within the actuator by movement of the actuator itself, that is directly conveyed to the switch circuitry from electric terminals of the actuator, the switch circuitry to generate a passive damping characteristic of the actuator during a failure of a power supply for providing power to the actuator.

20. (currently amended) The system of claim 19 in which the actuator ~~has~~ comprises a coil assembly, and the switch circuitry ~~including~~ comprises a switch for electrically connecting the coil assembly.

21. (currently amended) The system of claim 20 in which the coil assembly ~~[[is]]~~ comprises a multiple-phase coil assembly, and the switch electrically ~~connecting~~ connects one or more coil ends to change the passive damping characteristic of the actuator.

22. (original) The system of claim 20 in which a movement of the actuator generates an electromotive force (EMF) to operate the switch adapted to receive the electromotive force to maintain electrical connection between windings.

23. (previously presented) The system of claim 20 in which the switch circuitry comprises a solid-state device.

24. (currently amended) The system of claim 23 also comprising a clamp circuit ~~including~~ comprising a rectifier, and in which the switch circuitry comprises a single unidirectional switch.

25. (currently amended) The system of claim 19 in which the switch circuitry ~~[[is]]~~ comprises switch circuitry pulsed to change the passive damping characteristic of the actuator.

26. (currently amended) A method comprising:
in a vehicle suspension having an actuator, during a failure of a power supply for providing power to the actuator, generating a passive damping characteristic of the actuator using switch circuitry powered by energy, from movement of the actuator, that is directly conveyed to the switch circuitry from electric terminals of the actuator.

27. (currently amended) The method of claim 26 in which the actuator ~~has~~ comprises a coil assembly, and the switch circuitry including comprises a switch for electrically connecting the coil assembly.

28. (currently amended) The method of claim 27 in which the coil assembly ~~[[is]]~~ comprises a multiple-phase coil assembly, and the switch electrically connecting connects one or more coil ends to change the passive damping characteristic of the actuator.

29. (previously presented) The method of claim 27 in which the switch circuitry comprises a solid-state device.

30. (currently amended) The method of claim 29 ~~in which~~ also comprising steering bi-directional voltages and currents to a single unidirectional switch by a clamp circuit includes comprising a rectifier and the switch circuitry comprises a single unidirectional switch.

31. (currently amended) The method of claim 26 in which the actuator ~~includes~~ comprises an armature and a stator, the movement of the actuator generating a back electromotive force (EMF) as a result of the armature moving relative to the stator within the actuator, which powers the switch circuitry.

32. (currently amended) The method of claim 31 ~~in which~~ also comprising boosting the back EMF is boosted by a supplemental circuit.

33. (currently amended) The method of claim 32 in which the supplemental circuit ~~includes~~ comprises a bipolar Royer oscillator capable of operating at an input voltage approximately 0.5 volts.

34. (currently amended) The method of claim 26 in which the switch circuitry is also comprises switch circuitry enabled during a vehicle startup and shutdown.

35. (canceled)

36. (currently amended) The method of claim 26 ~~in which~~ also comprising powering the actuator ~~is powered~~ by a power electronics module that further provides an active clamp to the actuator.

37. (currently amended) The method of claim 36 ~~in which~~ also comprising substantially simultaneously enabling the active clamp and the switch circuitry ~~are simultaneously enabled~~ when a failure is detected or during a vehicle shutdown.

38. (currently amended) The method of claim 36 ~~in which~~ also comprising enabling the active clamp ~~is enabled~~ and, after enabling the active clamp, disabling the switch circuitry ~~is disabled sequentially~~ during a vehicle startup.

39. (currently amended) The method of claim 36 ~~in which~~ also comprising enabling the switch circuitry and, after enabling the switch circuitry, disabling the active clamp ~~are sequentially disabled~~ when switching back from failure to normal operation mode.

40. (currently amended) The method of claim 36 ~~in which~~ also comprising feeding a clamp circuit status signal ~~is fed~~ to the power electronics module to inhibit the power electronics module from switching when the switch circuitry is enabled.

41. (currently amended) The method of claim 26 ~~in which~~ also comprising pulsing the switch circuitry ~~is pulsed~~ to change the passive damping characteristic of the actuator.

42-43. (canceled).

44. (currently amended) The system of claim 36 in which the power electronics module ~~[[is]]~~ comprises power electronics powered by a battery.

45. (currently amended) The system of claim 36 in which the power electronics module ~~[[is]]~~ comprises power electronics powered by a large valued capacitor.

46-58. (canceled).

59. (currently amended) The system of claim 1 in which the failure ~~includes~~ comprises a failure of a power supply of a vehicle including the system.

60. (currently amended) The system of claim 1 in which the failure ~~includes~~ comprises a failure of a connection between a power supply and the suspension.

61. (currently amended) The system of claim 1 in which the switch circuitry ~~is also~~ comprises switch circuitry powered by energy from movement of the actuator to generate the passive damping characteristic during startup and shutdown of a vehicle including the system.

62. (currently amended) A method for use in a vehicle having a power generation system and a suspension having an actuator, the method comprising:

even when the power generation system fails to provide power, using power derived from movement of the actuator, that is directly conveyed to a switch from electric terminals of the actuator, to electrically enable ~~[[a]]~~ the switch to passively damp the actuator.

63. (currently amended) A suspension system comprising:
~~in a vehicle suspension having~~ an actuator, and
switch circuitry to respond to a failure of a power supply for providing power to the actuator by performing a switching operation to achieve passive damping of the actuator during the failure, the switch circuitry being powered~~[[.]]~~ to perform the switching operation during the failure, directly by movement of the actuator.

64. (currently amended) The system of claim 63 in which the actuator ~~[[has]]~~ comprises a coil assembly, and the switch circuitry ~~including~~ comprises a switch for electrically connecting the coil assembly to change the passive damping characteristic of the actuator.

65. (previously presented) The system of claim 64 in which the coil assembly comprises a multiple-phase coil assembly.

66. (previously presented) The system of claim 63 in which the switch circuitry comprises a solid-state device.

67. (currently amended) The system of claim 66 also comprising, ~~in the vehicle suspension~~, a clamp circuit ~~including~~ comprising a rectifier, and in which the solid-state device comprises a single unidirectional switch.

68. (currently amended) The system of claim 63 in which the actuator ~~includes~~ comprises an armature and a stator, the movement of the actuator generating a back electromotive force (EMF) as a result of the armature moving relative to the stator within the actuator, the switch circuitry being powered by the back EMF.

69. (previously presented) The system of claim 68 also comprising a supplemental circuit to boost the back EMF.

70. (previously presented) The system of claim 69 in which the supplemental circuit comprises a bipolar Royer oscillator capable of operating at an input voltage of approximately 0.5 volts.

71. (currently amended) The system of claim 63 in which the switch circuitry ~~is also~~ comprises switch circuitry to respond to vehicle startup and shutdown.

72. (previously presented) The system of claim 63 in which the switching operation is pulsed to control a passive damping characteristic of the actuator.